Af/1733 IDW

PATENT APPLICATION
Mo6805
MD-99-88-PU

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION OF		)
		) GROUP NO.: 1733
ULRICH HOLESCHOVSKY ET AL		)
		)
SERIAL NUMBER: 10/028,897		) EXAMINER: J.T. HARAN
		)
FILED:	DECEMBER 18, 2001	)
		)
TITLE:	A PROCESS TO LAMINATE POLYOLEFIN SHEETS TO URETHANE	)

LETTER

Assistant Commissioner for Patents

Washington, D.C. 20231

Sir:

Enclosed herewith is an Appeal Brief in the matter of the subject Appeal. Please charge the fee for filing the Brief, $340.00, to our Deposit Account Number 13-3848.

Respectfully submitted

By _____

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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an enveloped addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 12/3/04
Date

N. Denise Brown – Reg. No. 36,097
Name of applicant, assignee or Registered Representative

_____
Signature

December 3, 2004
Date

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TITLE: A PROCESS TO LAMINATE)
POLYOLEFIN SHEETS)
TO URETHANE

APPEAL BRIEF

Assistant Commissioner for Patents

Alexandria, VA 22313-1450

Sir:

This Brief is an appeal from the Final Office Action of the Examiner dated July 7, 2004, in which the rejection of Claims 15-18, 20-25 and 27-30 was maintained. A Notice of Appeal was filed on October 7, 2004.

I. REAL PARTY IN INTEREST

This application was assigned to Bayer Antwerpen by each of the named inventors.

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Date

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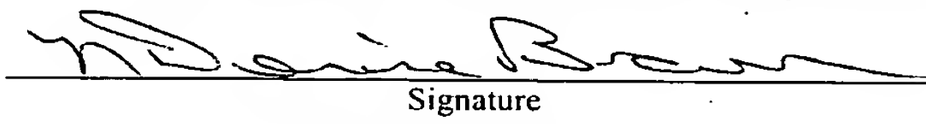
Name of applicant, assignee or Registered Representative



Signature

December 3, 2004

Date

II. RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings which Appellants are aware that may be related to, would directly affect, would be affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

The above-referenced application was filed with Claims 1-30.

Claims 1-14 were withdrawn from consideration in an amendment dated February 23, 2004 due to a restriction requirement under 35 U.S.C. §121. Claim 25 was amended on February 23, 2004 to correct a typographical error. Claims 15, 16 and 25 were amended on June 8, 2004 to place the claims in better form.

In an amendment filed September 13, 2004, Appellants attempted to incorporate the subject matter of Claims 19 and 26, respectively, into Claims 15 and 25, and to cancel Claims 19 and 26. The Examiner rejected entry of this amendment, but indicated the amendment would be entered for purposes of an Appeal.

Claims 15-18, 20-25 and 27-30 are pending but stand rejected. Claims 15-18, 20-25 and 27-30 are the subject claims of this appeal.

IV. STATUS OF AMENDMENTS

Appellants filed an amendment after final rejection on September 13, 2004. The Examiner indicated that this amendment would be entered for purposes of an Appeal. This amendment served to narrow the scope of the broad claims, i.e. Claims 15 and 25, by incorporating the subject matter of original Claims 19 and 26, respectively, into Claims 15 and 25. This amendment also canceled Claims 19 and 26.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Of the 14 pending Claims on Appeal, only Claims 15 and 25 are independent Claims. Claims 16-18 and 20-24 depend directly or indirectly on Claim 15. Claims 27-30 depend directly or indirectly on Claim 25.

The invention of Claim 15, the first independent claim of this Appeal, is directed to a process for producing a tufted good. (In order to assist the Honorable Board in its evaluation of the invention, reference will be made to the specification in which "P" will designate a page number and "L" will designate the line number(s)). The process of Claim 15 comprises (A) treating a flexible film with corona-discharge at a power density of 0.2 to 20 Ws/cm^2, (P7, L19-24) (B) contacting the treated flexible film with an uncured or a partially cured back surface of a precoated greige good wherein the precoat comprises a reactive polyurethane system (P5, L9-10 and L16-30), and (C) curing the article formed in (B) (P3, L5-7). (Also see P4, L3-9; P8, L8-15; and Formulation 2 at P11, L1 through P13, L8.)

The invention of Claim 25, the second independent Claim of this Appeal, is directed to process for producing a tufted good. This process comprises (A) treating a flexible film with corona-discharge at a power density of 0.2 to 20 Ws/cm^2 (P7, L19-24), (B) contacting the treated flexible film with an uncured or a partially cured back surface of a foam layer adhered to a greige good, wherein the foam layer comprises a reactive polyurethane system (P5, L9-10 and P5, L30 through P6, L6), and (C) curing the article formed in (B) (P8, L5-7). (Also see P4, L25 through P5, L2; P8, L8-15; and Formulation 1 at P11, L1 through 13, L8.)

As used in the present application, the term tufted goods refers to carpets and artificial turf (see P5, L4-5). These tufted goods are prepared in a conventional manner as described at P5, L6-10 of the present specification, with the greige good being constructed by tufting yarns into a primary woven or non-woven backing of jute, polypropylene or the like. The side of the greige good with the primary backing is typically contacted with a reactive polyurethane, which is usually mechanically frothed.

Advantages of the present invention include the fact that this process produced tufted goods in which a secondary backing is no longer needed to provide dimensional stability (see P2, L25 through P3, L7 of the present specification).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 15-18 and 20-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Number 5,612,113 (the Irwin Sr. reference) in view of U.S. Patent 6,299,715 (the Langsdorf et al reference) and U.S. Patent 5,578,369 (the Nohr et al reference), optionally taken with U.S. Patent 6,299,714 (the Takizawa et al reference), U.S. Patent 5,244,780 (the Strobel et al reference), U.S. Patent 5,070,121 (the Hinterwaldner et al reference) and U.S. Patent 5,527,629 (the Gastiger et al reference).

Claims 25-30 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,299,715 (the Langsdorf et al reference) in view of U.S. Patent Number 5,612,3 (the Irwin Sr. reference) and U.S. Patent 5,578,369 (the Nohr et al reference), optionally taken with U.S. Patent 6,299,714 (the Takizawa et al reference), U.S. Patent 5,244,780 (the Strobel et al reference), U.S. Patent 5,070,121 (the Hinterwaldner et al reference) and U.S. Patent 5,527,629 (the Gastiger et al reference).

VII. ARGUMENTS

CLAIMS 15-18 AND 20-24 ARE NOT RENDERED OBVIOUS BY U.S. PATENT 5,612,113 (THE IRWIN SR. REFERENCE) IN VIEW OF U.S. PATENT 6,299,715 (THE LANGSDORF ET AL REFERENCE) AND U.S. PATENT 5,578,369 (THE NOHR ET AL REFERENCE), OPTIONALLY TAKEN WITH U.S. PATENT 6,299,714 (THE TAKIZAWA ET AL REFERENCE), U.S. PATENT 5,244,780 (THE STROBEL ET AL REFERENCE), U.S. PATENT 5,070,121 (THE HINTERWALDNER ET AL REFERENCE) AND U.S. PATENT 5,527,629 (THE GASTIGER ET AL REFERENCE).

Appellants respectfully submitted that the presently claimed invention is not rendered obvious by this combination of references.

The presently claimed process for producing a tufted good comprises (A) treating a flexible film with corona-discharge at the specified power density, (B) contacting the film with the uncured or partially cured back surface of a precoated

greige good, in which the precoat comprises a reactive polyurethane system and (C) curing the resultant article. The tufted goods which result from this process exhibit improved dimensional stability. In fact, this process now enables the production of tufted goods that are dimensionally stable, even when produced without a secondary backing (see page 8, lines 1-4). The tufted goods produced by the presently claimed process exhibit delamination strengths which significantly exceed that of conventional tufted goods. (See page 2, line 25 through page 3, line 7).

It is respectfully submitted that it is not obvious to one of ordinary skill in the art from this combination of references that treating a flexible film with corona discharge treatment at the power density required by the present claims, contacting the treated flexible film with the back surface of a precoated greige good wherein the precoat is uncured or partially cured and it comprises a reactive polyurethane system, and then curing the resultant article forms a tufted good that is dimensionally stable and exhibits good delamination strength.

The Irwin Sr., reference ('113) discloses adding a film as a barrier layer to carpet products. This barrier layer prevents liquids and moisture from penetrating the carpet and cushion, and soaking the floor or surface underneath. This assists in preventing odors, stains, etc. As disclosed therein, these carpets may comprise (1) a primary backing with tufted yarn, a precoat, a conventional secondary backing and a film of an impervious material; or (2) a primary backing with tufted yarn, a precoat, a film of an impervious material and a secondary backing; or (3) a primary backing with tufted yarn, a precoat, a film of an impervious material, a foam layer and a secondary backing (column 3, lines 2-8). Generally, the film is generally applied between the primary backing before the secondary backing, or to the back side of the secondary backing by means of an adhesive that is insoluble in water and other liquids (column 1, lines 57-64; column 2, lines 1-8; column 3, lines 4-20).

It is also broadly disclosed by the Irwin Sr. reference that corona treatment on one side of the film may be sufficient to render the film bondable to the backing. See column 4, lines 36-38. This reference is clearly silent with respect to the power density, etc. of any such corona discharge treatment. It is evident that the film forms a fluid barrier between the precoated carpet and the secondary backing, or as an outer layer on the secondary backing.

It is well known and understood by one of ordinary skill in the art that precoats and foams must be cured after being applied, regardless of whether they comprise latex, polyurethane and something else. This may vary somewhat, depending on the construction of the carpet product and the specific layers involved. Some of the known curing methods include curing by heat including hot air (moist or dry), microwave energy, RF energy, electron beam, UV (ultra-violet) laser beam, infrared heat, etc. The Langsdorf et al reference describes various heat sources for curing, including those hot air, microwave or RF energy, electron beam, UV laser activation, etc. (see column 4, lines 36-46 of the Irwin Sr. reference). Corona discharge treatment of films in laminated carpets in not disclosed by this reference.

The secondary backing of the Langsdorg et al reference is coated with a skip-coat composition before being brought into contact with the precoated greige good at a point after the polyurethane adhesive has been treated to render it tacky. After the secondary backing is married to the precoated greige good, the laminated article is cured. (See column 4, lines 9-61.) As disclosed at column 7, lines 23-32, the skip coat composition functions to increase the adhesion between the PU-adhesive coated greige good and the secondary backing. This increased adhesion promotes superior lamination strength in the cured laminate. Accordingly, the skilled artisan would expect that the skip coating is necessary to increase the adhesive strength of the laminate.

Laminated products of the Nohr et al reference comprise at least two layers of sheet materials. The method of producing these laminates comprises (A) applying an adhesive composition to a surface of a first sheet material, (B) exposing the adhesive composition to incoherent, pulsed ultraviolet radiation from a dielectric barrier discharge excimer lamp, (C) contacting a surface of the second sheet material with the adhesive bearing surface of the first sheet material, and (D) allowing the adhesive to cure. It is further specified that the incoherent, pulsed ultraviolet radiation has a single narrow wavelength band in the range of from 260 to 360 nm and the adhesive compositions a cycloaliphatic diepoxide, a cationic photoinitiator, and a vinyl chloride-vinyl acetate, vinyl alcohol terpolymer. See column 1, line 48 through column 2, line 3. Suitable sheet materials are films or fibrous sheets (column 2, lines 60-67; column 6, lines 33-34).

Appellants respectfully submit that combining the Irwin Sr. reference with the Langsdorf et al reference and the Nohr et al reference does not fairly suggest the presently claimed invention to one of ordinary skill in the art.

This combination of references leads the skilled artisan to conclude that carpets with a film of material that is impervious to liquids can be prepared by applying an adhesive composition as in the Nohr et al reference to a primary carpet backing as in the Irwin Sr. reference, exposing the adhesive composition to the incoherent, pulsed ultraviolet radiation of the Nohr et al reference, contacting this surface with the surface of a sheet (film or fibrous material) that has been oxidized on the surface by, e.g. corona discharge as described at column 6, lines 33-45 of the Nohr et al reference, and finally applying a secondary backing to this film which has been skip coated with a suitable "adherence promoting composition" as disclosed at column 7, lines 15-33 of the Langsdorf et al reference. The specific adhesive composition of this combination would be that of the Nohr et al reference, i.e. an adhesive comprising a cycloaliphatic diepoxide, a cationic photoinitiator, and a vinyl chloride-vinyl acetate, vinyl alcohol terpolymer.

The corona discharge treatment of the sheet, i.e. film or fibrous material, is described by the Nohr et al reference as desirable to oxidize the surfaces of the sheet and to improve the wettability of the sheet with regard to the adhesive composition. This reference does **not** disclose or suggest that corona discharge treatment increases adhesive strength or delamination strength. Nor does the Nohr et al reference disclose or lead the skilled artisan to believe or even to reasonably expect that corona discharge treatment would be capable of improving the adhesive strength or delamination strength between a polyurethane foam layer as in the Irwin, Sr. reference and a film of a polyolefin. Rather, the improved adhesion, including high peel strength, is attributed by Nohr et al to the ultraviolet radiation treatment of the adhesive composition (see column 6, line 46 through column 7, line 6), not to corona discharge treatment of the film or fibous sheet!

It is evident from this that the Nohr et al reference leads one of ordinary skill in the art to believe that the ultraviolet radiation treatment of the adhesive composition is critical to improving the peel strength, not the corona discharge treatment of the film. Therefore, this combination of references would lead the skilled artisan to combine the ultraviolet radiation treatment (from Nohr et al) of the

adhesive composition with the method of the Irwin Sr. reference, and the skip coated secondary backing of the Langsdorf et al reference. This is **not**, however, the presently claimed invention.

Appellants respectfully submit that this combination of references does not fairly suggest to one of ordinary skill in the art that corona discharge treatment of a film will significantly improve delamination strength of the greige goods and dimensional stability such that a secondary backing is no longer needed. The present claims do not require ultraviolet radiation treatment of the adhesive composition which is described by the Nohr et al reference as improving peel strength.

Rather, the presently claimed invention treats a flexible film with corona-discharge at the specified power density and contacts this treated flexible film with the back surface of a precoated greige good, which is uncured or partially cured, and then cures the article formed. The precoat on the greige good comprises a reactive polyurethane system. Although the Nohr et al reference broadly discloses that the flexible film therein can be treated by corona-discharge, there is simply no information disclosed in this reference which leads the skilled artisan to conclude that corona-discharge treatment of a flexible film will improve delamination strength and/or dimensional stability. This reference merely states that the oxidized film surface has improved wettability with respect to the adhesive composition (see column 6, lines 33-45). Appellants are not aware of any correlation between wettability and peel strength, delamination strength, or dimensional stability. Nor do any of these references disclose or suggest there is any correlation between these.

In addition, the optional references also do not disclose or suggest this to the skilled artisan. These references are the Takizawa et al reference, the Strobel et al reference, the Hinterwaldner et al reference and the Gastiger et al reference.

The Takizawa et al reference is specific to improving adhesion between two sealants by treating the first sealant layer with corona discharge, applying a primer and then applying the second sealant layer. The present invention does not relate to two sealant layers and it does not require a primer. Thus, any improvement between sealant layers due to corona discharge treatment described by the Takizawa et al reference is not particularly pertinent to the present invention. This reference does

not disclose any relevant information as to whether corona discharge can improve the adhesion and dimensional stability of a tufted good by treating a flexible film with the corona discharge and contacting this treated flexible film with an uncured/partially cured polyurethane precoat on a greige good. The skilled artisan would readily recognize and understand the differences between bonding two sealants with a primer as in the Takizawa et al reference, and a bonding between precoated greige good and a flexible film as required by the present claim language. Appellants respectfully submit that this reference does not disclose or suggest that the bond strength between a flexible film and a reactive polyurethane system can be improved by corona discharge treatment of either substance.

Combining the Takizawa et al reference with the Irwin Sr., the Langsdorf et al and the Nohr et al reference also does not result in the presently claimed invention. As previously stated, this optional reference specifically relates to improving adhesion between two sealants with a primer, and treats one of the sealant layers with corona-discharge. At best, this reference would suggest that the skilled artisan treat the precoated greige good with corona discharge. This is not, however, the presently claimed invention. Accordingly, it is respectfully submitted that combining the Takizawa et al reference with the other three references does not fairly suggest the present invention to one of ordinary skill in the art.

The Strobel et al reference describes photographic films which comprise a polyalkyl acrylate or methacrylate/gelatin containing layer coated on a polyester substrate. As described therein, the polyester substrate may be a flame-treated, a fluorine-treated or a heated nitrogen corona treated substrate. Priming or subbing layers are not needed. It is apparent, however, that the Strobel et al reference requires a specific combination of polymer treatment and emulsion chemistry. There is no discussion in this reference concerning treating flexible films with corona discharge and/or contacting these with precoat of a reactive polyurethane system adhered to a greige good.

In fact, this reference is silent with respect to how one improves the bond strength and/or dimensional stability between flexible films, and reactive polyurethane precoats or reactive polyurethane foams. Accordingly, adding this

reference with the previous combination of the Irwin, Sr. reference, the Langsdorf et al reference and the Nohr et al reference does not provide the skilled artisan any additional insight into the presently claimed invention.

Solvent-free, low monomer or monomer-free hot melt compositions are disclosed by the Hinterwaldner et al reference. These hot melt compositions can form a corrosion-proof, abrasion proof or other protective film with barrier properties on substrates or molded bodies. This specific hot melt composition is not, however, required by the presently claimed invention. Although this reference broadly states that corona discharge of a plastic substrate improves wettability and thus adhesion (see column 23, lines 51-56), this is clearly limited to the hot melt compositions specifically described by the Hinterwaldner et al reference to achieve the corrosion-proof and abrasion resistant characteristics as described therein. Appellants respectfully submit that it is improper for the Examiner to selectively read the statement concerning the improved wettability and adhesion due to treating the non-polar substrates by flame or corona discharge in the Hinterwaldner et al reference and conclude that corona discharge of any substrate will improve the adhesion to any composition! This conclusion is clearly not supported by the reference!

The skilled artisan also has no insight into the presently claimed invention upon combining this reference with the Irwin, Sr. reference, the Langsdorf et al reference and the Nohr et al reference. It is respectfully submitted that one of ordinary skill in the art would not be motivated to combine the Hinterwaldner et al reference with these other three references. Why would the skilled artisan seeking to improve delamination strength and/or dimensional stability of a greige good consider a reference directed to forming corrosion-proof, abrasion proof substances.

Finally the Gastiger et al reference discloses a combination of treating a substrate (e.g. sheet, film or shaped article) with corona discharge and depositing a layer of SiO_2 on the substrate (by a gaseous phase under plasma or cathodic pulverization) improves "wettability" of the surface (see column 5, lines 22-26). This leads one of ordinary skill in the art to believe that the film must also have a layer of SiO_2 to improve wettability. The presently claimed invention does not require a layer of SiO_2 layer on the film surface! Accordingly, this reference does not add anything to the combination of the Irwin Sr. reference, the Langsdorf et al reference and/or

the Nohr et al reference. It is respectfully submitted that this combination of references does not fairly suggest the presently claimed invention to one of ordinary skill in the art.

Finally, Appellants respectfully submit that the working examples of the present application provide adequate evidence that corona discharge treatment of the flexible film provides both a foam/cushion formulation and a precoat formulation with improved delamination strength. In particular, see Table 2 on page 13. For the foam/cushion formulations, depending on the type of film, corona-discharge treatment improved the delamination strength by a minimum of 9.8 times (ethylene-vinyl acetate) up to about 135 times (high density polyethylene). For the precoat formulation, corona discharge treatment improved the delamination strength by a minimum of 8.6 times (high density polyethylene) up to about 38 times (low density polyethylene). It is respectfully submitted that one of ordinary skill in the art could not possibly expect that corona-discharge treatment of the flexible film as required by the present invention would improve the delamination strength as illustrated in Table 2 of the present application.

It is respectfully submitted that the present combination of references does not fairly suggest to the skilled artisan that corona-discharge treatment of the flexible film could or would increase the delamination strength of the resultant cured articles significantly. Only after reading the present specification does this become apparent to the skilled artisan. Such a perspective does not, however, provide a proper basis for a rejection under 35 U.S.C. §103(a).

In view of the above arguments, it is respectfully submitted that Claims 15-18 and 20-24 are not obvious under 35 U.S.C. §103(a) in view of these reference.

CLAIMS 25-30 ARE NOT RENDERED OBVIOUS BY U.S. PATENT 6,299,715 (THE LANGSDORF ET AL REFERENCE) IN VIEW OF U.S. PATENT 5,612,113 (THE IRWIN SR. REFERENCE) AND U.S. PATENT 5,578,369 (THE NOHR ET AL REFERENCE), OPTIONALLY TAKEN WITH U.S. PATENT 6,299,714 (THE TAKIZAWA ET AL REFERENCE), U.S. PATENT 5,244,780 (THE STROBEL ET AL REFERENCE), U.S. PATENT 5,070,121 (THE HINTERWALDNER ET AL REFERENCE) AND U.S. PATENT 5,527,629 (THE GASTIGER ET AL REFERENCE).

As previously stated, the invention of Claims 25-30 is similar to that of Claims 15-18 and 20-24 except that the treated flexible film is contacted with the partially cured or uncured back surface of a foam layer that is adhered to the back side of the greige good.

It is respectfully submit that the Langsdorf et al reference is not particularly pertinent to the presently claimed invention. As previously discussed, the Langsdorf et al reference applies a polyurethane adhesive (via a puddle) to the reverse side of the greige good, passes the coated greige good under a doctor blade, and then contacts the reverse side of the coated greige good with a skip-coated secondary backing, passes the carpeting through a pair of marriage rollers or similar devices and into an oven for curing (column 4, lines 9-29). This skip coating functions to increase the adhesion between the PU adhesive coated greige good and the secondary backing. Increased adhesion promotes superior lamination strength in the cured laminate. Thus, this reference leads the skilled artisan to conclude that the skip coating is necessary to increase the adhesive strength of the laminate.

Skip coatings and secondary backings are not required by the present invention. In fact, one purpose and advantage of the presently claimed invention is that the delamination strength and dimensional stability are increased so by the corona discharge treatment of the flexible film that secondary backings are not longer needed for dimensional stability.

Combining the Irwin, Sr. reference and the Nohr et al reference with the Langsdorf et al reference does not fairly suggest the presently claimed invention to one of ordinary skill in the art. Rather, this combination suggests including the flexible film of the Irwin Sr. reference in the process of the Langsdorf et al reference as described above, exposing the surface of the adhesive composition (in this case the foam layer) to incoherent, pulsed ultraviolet radiation as disclosed in the Nohr et al reference, and exposing the flexible film to corona discharge as in the Nohr et al reference. Appellants respectfully submit that this is not, however, the presently claimed invention.

Corona discharge treating of the sheet (film or fibrous material) in the Nohr et al reference is disclosed as being desirable to oxidize the surfaces of the sheet and to improve wettability of the sheet with regard to the adhesive

composition. It is not disclosed or suggested by this reference that corona discharge treatment increases adhesive strength or delamination strength. Appellants respectfully submit that there is no information disclosed in the Nohr et al reference which would lead the skilled artisan to expect the corona discharge treatment would be capable of improving adhesive strength and delamination strength between a foam layer and a flexible film as required by the presently claimed invention. It is expressly disclosed by the Nohr et al reference that the improved adhesion therein, including the high peel strength, is due to the ultraviolet radiation treatment of the adhesive composition, not to the corona discharge treatment of the film or fibrous sheet. Therefore, the skilled artisan would believe the ultraviolet radiation treatment of the foam layer is essential to improve adhesion, delamination, etc.

In addition, the optional references do not disclose or suggest to one of ordinary skill in the art that the corona discharge treatment of a flexible film will significantly improve the delamination strength and/or dimensional stability. These optional references include the Takizawa et al reference, the Strobel et al reference, the Hinterwaldner et al reference, and the Gastinger et al reference.

As previously discussed, the Takizawa et al reference discloses that adhesion between two sealants can be improved by treating the first sealant with corona discharge, applying a primer and then applying the second sealant. This reference does not disclose any information that leads one of ordinary skill in the art to conclude that corona discharge treatment of a flexible film can improve the delamination strength and dimensional stability when the treated film is contacted with a foam layer on a greige good, and cured. This is simply not hinted at by the Takizawa et al reference. Thus, combining this reference with the Langsdorf et al reference, the Irwin Sr., reference and the Nohr et al reference does not clearly suggest the presently claimed invention to one of ordinary skill in the art.

Photographic films are described by the Strobel et al reference. These films comprise a polyalkyl acrylate or methacrylate/gelating containing layer on a polyester substrate. It is readily apparent that the Strobel et al reference is specific to a specific combination of polymer treatment and emulsion chemistry. No information is disclosed or suggested by this reference which indicates or hints that corona discharge treatment of flexible films that are contacted with a foam layer on a greige

good wherein the foam layer comprises a reactive polyurethane system results in improved delamination strength and/or dimensional stability. This is simply not suggested by the Strobel et al reference.

Furthermore, combining the Strobel reference with the other three references (Langsdorf et al, Irwin Sr. and Nohr et al), does not lead the skilled artisan to the presently claimed invention. One of ordinary skill in the art would continue to believe that the ultraviolet radiation treatment of the foam layer is essential to improved delamination strength and/or dimensional stability. Thus, this combination does not render the present invention *prima facie* obvious.

The hot melt compositions of the Hinterwaldner et al reference are solvent free, low monomer or monomer-free and are suitable for forming a corrosion-proof, abrasion-proof and/or other protective film with barrier properties on substrates or molded bodies. These hot melt compositions are not, however, required by the presently claimed invention. Nor is the present invention directed to forming a corrosion-resistant or abrasion-proof surface as disclosed by the Hinterwaldner et al reference. Appellants respectfully submit that it is improper for the Examiner to selectively read the statement concerning the improved wettability and adhesion of the non-polar substrates after corona-discharge treatment of flame treatment and conclude that corona-discharge treatment of any film improves the adhesion, delamination and/or dimensional stability when that film is contacted with any composition. This is an overbroad reading of the reference.

One of ordinary skill in the art has no insight into the presently claimed invention upon combining the Hinterwaldner et al reference with the Langsdorf et al, the Irwin, Sr. and the Nohr et al references. This broad statement by the Hinterwaldner et al reference would not persuade the skilled artisan that ultraviolet light treatment of the foam layer as disclosed by Nohr et al is not necessary.

In addition, the Gastiger et al reference discloses treating a substrate (sheet, film or shaped article) with corona discharge and depositing a layer of SiO_2 on the substrate to improve wettability of the surface. Thus, combining this reference with the Langsdorf et al, the Irwin, Sr. and the Nohr et al references would lead the skilled artisan to believe that a layer of SiO_2 is also needed. The present invention does not, however, require a layer of SiO_2.

As Appellants pointed out above, the working examples (specifically Table 2 on page 13) support the significant improvement in delamination strength and dimensional stability from corona discharge treatment of a flexible film that is then contacted with a foam layer. One of ordinary skill in the art would simply not expect this upon reading this combination of references.

In view of the preceding arguments, Appellants submit that each of the Examiner's rejections is in error and respectfully request that the rejections be reversed. The allowance of Claims 15-18, 20-25 and 27-30 is respectfully requested.

Respectfully submitted,

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VIII. CLAIMS APPENDIX:

The following is a listing of the claims on Appeal.

15. A process for producing a tufted good comprising:

(A) treating a flexible film with corona-discharge at a power density of 0.2 to 20 Ws/cm^2;

(B) contacting the treated flexible film with an uncured or a partially cured back surface of a precoated greige good, wherein the precoat comprises a reactive polyurethane system;

and

(C) curing the article formed in (B).

16. The process of Claim 15, wherein the corona-discharge treated flexible film is contacted with an uncured or a partially cured back surface of a foam layer which is adhered to the back surface of a precoated greige good.

17. The process of Claim 15, wherein a foam layer is adhered to the back surface of the corona-discharge treated flexible film.

18. The process of Claim 15, wherein the curing is at temperatures of from about 65 to about 150°C for about 2 to 10 minutes.

20. The process of Claim 16, wherein the foam layer comprises a reactive polyurethane system.

21. The process of Claim 17, wherein the foam layer comprises a reactive polyurethane system.

22. The process of Claim 15, wherein said flexible film is a polyolefin film.

23. The process of Claim 15, wherein said flexible film has a thickness of about 0.025 mm to about 1 mm.

24. The process of Claim 15, wherein the power density of the corona-discharge is from 0.5 to 10 Ws/cm^2.

25. A process for producing a tufted good comprising:

(A) treating a flexible film with corona-discharge at a power density of 0.2 to 20 Ws/cm^2;

(B) contacting the treated flexible film with an uncured or a partially cured back surface of a foam layer adhered to a greige good, wherein the foam layer comprises a reactive polyurethane system;

and

(C) curing the article formed in (B).

27. The process of Claim 25, wherein the curing is at temperatures of from about 65 to about 150°C for about 2 to 10 minutes.

28. The process of Claim 25, wherein said flexible film is a polyolefin film.

29. The process of Claim 25, wherein said flexible film has a thickness of about 0.025 mm to about 1mm.

30. The process of Claim 25, wherein the power density of the corona-discharge is from 0.5 to 10 Ws/cm^2.

IX. EVIDENCE APPENDIX:

Appellants have not submitted any evidence.

X. RELATED PROCEEDINGS APPENDIX:

There are no related proceedings that Appellants are aware of and identified under RELATED APPEALS AND INTERFERENCES. Thus, no copies of decisions are attached.